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Notes:

1. Untranslatable words are replaced with asterisks (****).
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CLAIM + DETAILED DESCRIPTION

[Claim(s)]

[Claim 1] The cosmetics paints characterized by the thing containing a pigment which it has the shape of a ball of the diameter of a uniform particle mostly, and the surface consists of smooth paints.

[Claim 2] Said paints are cosmetics paints characterized by d25/d75 of article size distribution being 1.5 or less in cosmetics paints according to claim 1.

[Claim 3] As for 2, said paints are [Claim 1 and] the cosmetics paints which cover the surface of the spherical inorganic base material of the diameter of a uniform particle with the metal oxide gel containing a pigment mostly in the cosmetics paints of a description, and are characterized by things either.

[Claim 4] They are the cosmetics paints characterized by generating with a sol-gel method from the start solution with which said metal oxide gel contains metal ARUKOKISHIDO, water, acid, and alcohol in cosmetics paints according to claim 3.

[Claim 5] As for 2, said paints are [Claim 1 and] the cosmetics paints which wrap the nature particulates of nonporous [inorganic] entirely in the inorganic porous material layer containing a pigment in the cosmetics paints of a description, and are characterized by things either.

[Claim 6] The process which adds water and acid in the alcoholic solution containing the process which mixes a pigment, metal ARUKOKISHIDO, and alcohol, and a pigment and metal ARUKOKISHIDO, The process which immerses a spherical inorganic base material into the solution which consists of the above-mentioned pigment, metal ARUKOKISHIDO, water, acid, and alcohol, pulls up after that, and forms a pigment content gel coating film in said inorganic base material surface, The cosmetics paints characterized [of a production method] by having the process which calcinates the inorganic base material covered by the pigment content gel coating film at a predetermined temperature.

[Claim 7] The silicate of an alkaline metal, carbonate of an alkaline metal, the orthophosphate of an alkaline metal, The nitrate of an alkaline metal, the halogenation thing of alkaline-earth metals, the nitrate of alkaline-earth metals, The 1st solution containing at least one sort of the inorganic compound chosen from sulfate of aluminum, the nitrate of aluminum, and the chloride salt of aluminum, The process which carries out mixed distribution of a surface-active agent, a pigment, and the nature particulates of nonporous [inorganic], and obtains the 1st mixed-solution, The process which carries out addition mixture of the organic solvent at said 1st mixed-solution, and obtains a water-in-oil type emulsion, Carbonate of an alkaline metal, the nitrate of an alkaline metal, the halogenation thing of alkaline-earth metals, The inorganic acid salt of alkaline-earth metals, the organic acid salt of alkaline-earth metals, the ammonium salt of inorganic acid, The process which mixes the 2nd solution which forms water-insoluble nature precipitation output, and said water-in-oil type emulsion, and obtains the 2nd mixed-solution by a reaction with said 1st solution while at least one sort of the compound chosen from among the ammonium salt of organic acid is included, The cosmetics paints characterized [of a production method] by having the process which separates said water-insoluble nature precipitation output from said 2nd mixed-solution.

[Detailed Description of the Invention]

[0001]

[Industrial Application] This invention relates to cosmetics paints and the cosmetics paints which consist of paints with an almost spherical diameter of a uniform particle especially.

[0002]

[Description of the Prior Art] Generally, the paints for cosmetics are included in makeup cosmetics, such as face powder, foundation, eye shadow, a teak color, and a lipstick, and the color of all tones can be directed now. Although there are an inorganic pigment and an organic color in the paints of cosmetics, arbitrary colors are expressed by usually mixing two or more sorts of these paints in constitution paints, such as talc and mica. This is the result of the mixing-colors effect by mixture of the color which each paints have, i.e., mixed colors, being caused by mixture of the paints of two or more colors.

[0003] by the way -- making mixture of this color, i.e., mixed colors, into the actually performed technique -- an optical theory -- as the mixed-colors theory established also-like and in color theory -- additive color mixing and subtractive color mixing -- juxtaposition additive color mixing is known further. Additive color mixing means mixed colors which brightness will go up and will become transparent white light if the red called three primary colors of colored light and a green and blue light are piled up and added, and subtractive color mixing will mean mixed colors which brightness falls and become black, if the coloring matter of the red, blue, and yellow which are called three primary colors of coloring matter is piled up and added. Furthermore, since color mixing is performed on the retina of people's eyes by being juxtaposed in the shape of [with which it was covered without each color overlapping] a halftone dot, juxtaposition additive color mixing means the mixed colors to which brightness does not carry out the method of a fall like subtractive color mixing.

[0004] This juxtaposition additive color mixing is used for a color display, sketch drawing, etc., for example. In a color display, red, green, and blue are displayed on each pixel unit, and a color is not mixed. Therefore, a clear screen can be formed. Moreover, Monet in impressionist school pictures, Manet, Sisley, etc. use sketch drawing like well-known, and their picture is the bright style which made the most of light. That is, the effect by juxtaposition additive color mixing is reflected in the picture.

[0005]

[Problem to be solved by the invention] However, when putting powder-like cosmetics, such as face powder, foundation, eye shadow, and a teak color, on skin, paints are infinite forms, since particle diameter is also uneven, coloring matter will be mixed, and what is called subtractive color mixing will usually be performed. Therefore, the color of the skin when finishing may have kept by ***** by the color when attaching a cosmetic to skin becoming dark, and applying thickly and piling up on skin, so that coloring matter was mixed. even if this invention is made in view of the above-mentioned conventional technical problem and the purpose puts the cosmetic on skin, brightness does not fall -- ***** -- it is offering the cosmetics paints which are not.

[0006]

[Means for solving problem] In order to attain the above-mentioned purpose, the cosmetics paints concerning this invention have the following features.

[0007] (1) It is characterized by consisting of paints containing a pigment with an almost spherical diameter of a uniform particle.

[0008] (2) In the cosmetics paints of the above-mentioned (1) description, paints are characterized by d25/d75 of article size distribution being 1.5 or less.

[0009] (3) the above (1) or (2) -- in the cosmetics paints of a description, paints cover the surface of the spherical inorganic base material of the diameter of a uniform particle with the metal oxide gel containing a pigment mostly, and it is characterized by things.

[0010] (4) In the cosmetics paints of the above-mentioned (3) description, said metal oxide gel is characterized by generating with a sol-gel method from the start solution containing metal ARUKOKISHIDO, water, acid, and alcohol.

[0011] (5) the above (1) or (2) -- in the cosmetics paints of a description, said paints wrap the nature particulates of nonporous [inorganic] entirely in the inorganic porous material layer containing a pigment, and it is characterized by things.

[0012] (6) The process which adds water and acid in the alcoholic solution containing the process which mixes a pigment, metal ARUKOKISHIDO, and alcohol, and a pigment and metal ARUKOKISHIDO, The process which immerses a spherical inorganic base material into the solution which consists of the above-mentioned pigment, metal ARUKOKISHIDO, water, acid, and alcohol, pulls up after that, and forms a pigment content gel coating film in said inorganic base material surface, It is characterized [of a manufacturing process] by having the process which calcinates the inorganic base material covered by the pigment content gel coating film at a predetermined temperature.

[0013] (7) The silicate of an alkaline metal, carbonate of an alkaline metal, the orthophosphate of an alkaline metal, The nitrate of an alkaline metal, the halogenation thing of alkaline-earth metals, the nitrate of alkaline-earth metals, The 1st solution containing at least one sort of the inorganic compound chosen from sulfate of aluminum, the nitrate of aluminum, and the chloride salt of aluminum, The process which carries out mixed distribution of a surface-active agent, a pigment, and the nature particulates of nonporous [inorganic], and obtains the 1st mixed-solution, The process which carries out addition mixture of the organic solvent at said 1st mixed-solution, and obtains an oil Nakamizu drop emulsion, Carbonate of an alkaline metal, the nitrate of an alkaline metal, the halogenation thing of alkaline-earth metals, The inorganic acid salt of alkaline-earth metals, the organic acid salt of alkaline-earth metals, the ammonium salt of inorganic acid, The process which mixes the 2nd solution which forms water-insoluble nature precipitation output, and said water-in-oil type emulsion, and obtains the 2nd mixed-solution by a reaction with said 1st solution while at least one sort of the compound chosen from among the ammonium salt of organic acid is included, It is characterized by having the process which separates said water-insoluble nature precipitation output from said 2nd mixed-solution.

[0014] A means is explained in full detail individually hereafter.

[0015] the cosmetics paints by a sol-gel method -- here, [an inorganic base material] It is the spherical particulates which consist of spherical particulates of coloring nature, such as spherical particulates of the transparency of silica, alumina, etc. or titanium oxide, iron oxide, and a zirconium dioxide, or a **** melting object of two or more sorts of these things, and 0.1micro - 50micro of mean particle sizes are 0.5-10micro preferably. Furthermore, the article size distribution of an inorganic base material has [the almost uniform thing of 1.5 or less particle diameter] addition article-size-distribution ratio d25-/d75 desirable value. The coat formation of metal oxide gel which contains a pigment as particle diameter is less than 0.1 micrometer becomes difficult. On the other hand, if 50micro is exceeded, a feel etc. not only falls as cosmetics paints, but the adhesion to the skin will worsen. Furthermore, if article size distribution exceeds 1.5 by d25/d75, the ratio to which it becomes impossible for the rate that spherical particulates spread as a uniform makeup film to demonstrate the effect of a fall and the above juxtaposition additive color mixing, and uneven particles overlap up and down on skin will increase, and subtractive color mixing will be approached. Moreover, as for the film thickness of the coat of the metal oxide gel containing a pigment, 0.05 micrometers or more are desirable. A pigment may be exposed when film thickness is less than 0.05 micrometer.

[0016] Metal oxide gel consists of metal ARUKOKISHIDO, water, acid, and alcohol.

[0017] First, generally metal ARUKOKISHIDO is M(OR) n. It is expressed (M: metallic elements, OR:alkoxyl group, the number of oxidization of n:metallic elements). as the typical thing of this metal ARUKOKISHIDO -- Si(OR)4 independent [in things, such as Zn, Ti, aluminum and Fe, and Zr, / by each purpose] besides Si, although mentioned -- or it can mix and use. For example, what is necessary is just to use Zr that what is necessary is just to use Zn or Ti, to make reactivity high, when intensity and alkali-proof improvement are required.

[0018] Si(OR)4 ***** -- Si(OCH3)4, Si(OC2 H5)4 (tetra-ethoxy SHIRAN), Si(iso-OC3 H7)4, Si(tert-OC4H9)4, and Si(sec-OC4 H9)4 etc. -- it is mentioned.

[0019] Ti(OR)4 ***** -- Ti(OCH3) 4, Ti(OC2 H5) 4, Ti(iso-OC3 H7) 4, and Ti(OC4 H9) 4 etc. -- it is mentioned.

[0020] aluminum(OR)3 ***** -- aluminum(OCH₃)₃, aluminum(OC₂H₅)₃, aluminum(iso-OC₃H₇)₃, and aluminum(OC₄H₉)₃ etc. -- it is mentioned.

[0021] Zr(OR)₄ ***** -- Zr(OCH₃)₄, Zr(OC₂H₅)₄, Zr(iso-OC₃H₇)₄, and Zr(OC₄H₉)₄ etc. -- it is mentioned.

[0022] Moreover, as alcohol which is a solvent, the alcohol of 1-5 has a desirable carbon number, for example, methanol, ethanol, propanol, butanol, pen TANORU, etc. are mentioned.

[0023] Moreover, as acid used as a catalyst of hydrolysis, chloride, sulfuric acid, nitric acid, acetic acid, etc. are mentioned, for example.

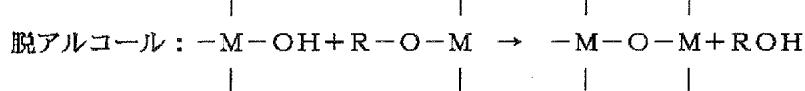
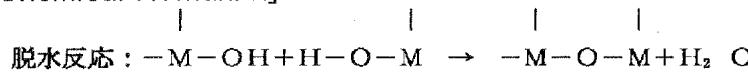
[0024] The following chemical reaction has occurred in the sol-gel method.

[0025]

[Chemical formula 1] Hydrolysis: M(OR)_{4+x}H₂O → M(OH)_x The next polymerization reaction occurs easily with (OR)_{n-x+x}ROH hydrolysis.

[0026]

[Chemical formula 2]



Therefore, Si(OC₂H₅)₄ A case is hydrolysis first and is Si(OH)₄. Si(OH)₄ which changes and is rich in this reactivity SiO₂ with which it polymerized and **Si-O-Si** was connected It becomes a solid.

[0027] Moreover, as a pigment which contains in metal oxide gel and with which an inorganic base material is coated, when it adds in metal ARUKOKISHIDO content alcoholic solution, the inorganic pigment and organic color which dissolve uniformly are suitable.

[0028] As an inorganic pigment, iron oxide, such as yellow oxide of iron (FeO(OH)), red iron oxide (Fe₂O₃, red ochre), and black oxide of iron (Fe₂O₄), sulfur, aluminum silicate, ultramarine, a zinc oxide, and titanium oxide are mentioned.

[0029] The rake-sized paints are used as an organic color, and Litholrubin B (red No. 202) Lake red CBA (red No. 204), the HERIN boss pink CN (red No. 226), A bench gin orange G (orange 204) number, the bench gin yellow G (yellow No. 205) Brilliant fast Scarlett (red No. 404), permanent red F5R (red No. 405), a HANZA orange (orange No. 401), HANZA yellow (yellow No. 401), copper phthalocyanine blue (blue No. 404), etc. are mentioned.

[0030] Moreover, to metal ARUKOKISHIDO, preferably, 0.01-20wt.% addition of an inorganic pigment or an organic color is done, and, as for 3-10wt.% addition, it is made more desirable. Manufacture will become difficult, if the coloring effect is lost and 20% is exceeded, when the amount of addition is less than 0.01%.

[0031] As inorganic porosity particulates which finally become the core of coloring particulates in manufacture of the coloring particulates by the cosmetics paints emulsification method by an emulsification method 2 silicon oxides, an aluminum oxide, titanium oxide, a zirconium dioxide, The compound melting object of one sort or two sorts or more of things chosen from iron oxide and at least two or more sorts of things chosen from 2 silicon oxides (namely, anhydrous silicic acid (SiO₂)), an aluminum oxide, titanium oxide, a zirconium dioxide, and iron oxide is used.

[0032] Moreover, although porosity 2 silicon oxide (namely, Silikagel (SiO₂ and H₂O)) is mainly used as an inorganic porous material layer which wraps the above-mentioned nature particulates of nonporous [inorganic] entirely while the charge of a color material confines with 5 weight % - 60weight % of content preferably 1 weight % - 80weight % In addition, at least one sort chosen from a porosity magnesium silicate, porosity calcium carbonate, porosity magnesium carbonate, porosity barium sulfate, porosity aluminium hydroxide, porosity silicic acid calcium, porosity silicic acid barium, and porosity barium carbonate can be used. Here, the nature particulates of nonporous [inorganic] do not have many holes on the surface compared with an inorganic

porous material, and may have a hole.

[0033] moreover, as a surface-active agent for obtaining a water-in-oil type emulsion by a manufacturing process Beef tallow ARUKIRU propylene diamine, polyoxy ethylene DODESHIRU amine, Oxyethylene DODESHIRU amine, hardening beef tallow ARUKIRU propylene diamine, Polyoxy ethylene octadecyl amine, polyoxy ethylene beef tallow ARUKIRU propylene diamine, Octadecyl amine acetate, tetradecyl amine acetate, octadecyl amine acetate, Tetradecyl amine acetate, NORUMARU sodium dodecylbenzenesulfonate, polycarboxylic acid type polymer negative ion and me -- ylmethyl taurine acid sodium -- Polyoxy ethylene nonylphenol ether, PORIKISHI ethylene octyl phenol ether, Polyoxy ethylene sorbitan MONOORETO, sorbitan monostearate, Polyoxy ethylene distearate, oxyethylene oxypropylene block polymer, Polymer amine, sodium dodecylbenzenesulfonate, castor oil sulfate ester, polyoxyethylene alkyl ether, polyoxyethylene lauryl ether, polyoxyethylene SECHIRU stearyl ether, At least one or more sorts chosen from polyoxyethylene oleyl ether can be used.

[0034] About paints, it is the same as that of ***.

[0035]

[Function] According to this invention, since it is paints with an almost spherical diameter of a uniform particle, it is juxtaposed, without paints' sliding on a skin top and paints overlapping, if paints are put on skin. Namely, it will be in the state of juxtaposition additive color mixing. Therefore, there is no ***** and the brightness of skin does not fall. Furthermore, the bright high coloring effect of chroma saturation is also acquired.

[0036] Moreover, when the pigment is included by transparent metal oxide gel, coloring which resembles the textures of skin and has a natural transparent feeling is obtained.

[0037] furthermore, the case where the pigment is included by metal oxide gel -- sweat and leather fat -- getting wet -- there is almost no color change.

[0038]

[Working example] Next, a work example and a comparative example are given and this invention is explained concretely.

[0039] (Red No. 226) as cosmetics paints work-example 1. paints by a sol-gel method 6.0 superposition parts, 4.0 superposition parts were mixed for the dispersing agent (made by "Goh Serryn L-301" Japan Composition company" (polyvinyl alcohol)), 90.0 (ethyl alcohol) superposition parts were mixed for the solvent, distributed processing was carried out for 10 minutes using the distributed machine, and pigment dispersion liquid was prepared.

[0040] Next, as metal ARUKOKISHIDO, 56.0g and water were mixed for 3.0g and ethyl alcohol, 0.5g and 12.5g of the above-mentioned pigment dispersion liquid were mixed for 3.0g and concentrated hydrochloric acid, tetra-ethoxy SHIRAN was agitated in normal temperature for 2 hours, and coating liquid (75.0g) was obtained.

[0041] After checking that 25.0g of spherical inorganic base materials were filled with the coating liquid (75.0g) obtained above, it agitated well, and the base material surface has fully been covered with liquid, temperature is gradually raised from room temperature, it keeps at 60 degrees C, the whole is dried, and a coloring gel layer is formed. In addition, temperature was raised, and it was made around 150 degrees C, and was neglected for 1 hour, the coloring gel layer was stuck to the base material surface, and the red No. 226 silica processing spherical cosmetics paints of the diameter of a uniform particle were obtained mostly.

[0042] Here, as a spherical inorganic base material of a work example 1, it is average-particle-diameter 1.5micrometer**0.1 of Nippon Shokubai Kagaku Kogyo Co., Ltd., and the article size distribution d25/d75 used the silica spherical particles (SHIHO star KE-P150 and a "SHIHO star" are registered trademarks) of 1.3. The article size distribution d25/d75 of the obtained spherical cosmetics paints was 1.3.

[0043] As comparative example 1, one side and a spherical inorganic base material with article size distribution uneven as a comparative example 1 ADMATECHS CO. LTD. 2 [silica spherical particle ADOMA fine SO-C], 0.4-0.6 micrometer of particle diameter and this ADOMAFIN SO-C5, 1:1 mixture each of 1.5-2 micrometers of particle diameter, 0.4-2.0 micrometers of particle diameter and article size distribution obtained the red No. 226 silica processing spherical cosmetics paints of the diameter of an uneven particle according to the process of the above-

mentioned work example 1 using the thing of 3.5 by d25/d75. The article size distribution d25/d75 of the obtained spherical cosmetics paints was 3.5.

[0044] By the same method as the work-example 2. work example 1, the paints used were changed into yellow No. 205, same processing was performed, and the yellow No. 205 silica processing spherical cosmetics paints of the diameter of a uniform particle were obtained mostly. The article size distribution d25/d75 of the obtained spherical cosmetics paints was 1.3.

[0045] According to the above-mentioned work example 2, the yellow No. 205 silica processing spherical cosmetics paints of the diameter of an uneven particle were obtained using the uneven-like particles of the comparative example 2. comparative example 1. The article size distribution d25/d75 of the obtained spherical cosmetics paints was 3.5.

[0046] "Eye-shadow" 100g was prepared using the red No. 226 silica processing paints and yellow No. 205 silica processing paints which were obtained in the work-example 3. work examples 1 and 2.

[0047]

1. Talc 26.20g 2. Polymethacrylic Acid 6.00g 3. Mica Titanium 29.00g 4. Collagen Processing SERISA Night 0.30g 5. Methylpolisiloxane 9.00g 6. Squalane 0.20g 7. Jojoba Oil 2.00g 8. Octanoic Acid Sept Iles 1.50g 9. JIISO Stearic Acid Diglyceryl 2.00G 10. Vitamin E 0.20G 11. PARAOKISHI Benzoic Ester 0.10G 12. Red Ocher / Talc (50%) 5.00G = 13. Black Oxide of Iron/Talc (50%) 7.50g 14. Ultramarine/Talc (50%) 3.00g 15. Red No. 226 Silica Processing Paints 3.50g 16. Yellow No. 205 Silica Processing Paints 4.50g "Teak color" 100g was prepared using the 100g of whole-quantity work-example 4. red No. 226 silica processing paints similarly obtained in the work examples 1 and 2, and yellow No. 205 silica processing paints.

[0048]

1. Talc 44.50g 2. Nylon Powder 10.00g 3. Auction Site 9.00g 4. Mica 8.00g 5. Titanium Oxide 1.00g 6. Mica Titanium 5.00g 7. Stearic Acid Magnesium 2.00g 8. Collagen Processing SEISAITO 0.20g 9. Methylpolisiloxane 2.00g 10. squalane 1.00g 11. jojoba oil 2.00g 12. octanoic acid Sept Iles = 1.50g 13. Vitamin E 0.20g 14. PARAOKISHI Benzoic Ester 0.10g 15. Carmine/Talc 2.00g 16. Red No. 226 Silica Processing Paints 7.00g 17. Yellow No. 205 Silica Processing Paints 4.50g "Eye-shadow" 100g was prepared by the same prescription as a work example 3 using the red No. 226 silica processing paints and yellow No. 205 silica processing paints which were obtained by the 100g of whole-quantity comparative example 3. comparative examples 1 and 2.

[0049] Yellow No. 205 silica processing paints were used for the comparative example 4. red No. 226 silica processing paints similarly obtained by comparative examples 1 and 2, and "teak color" 100g was prepared by the same prescription as a work example 4.

[0050] The "eye shadow" and the "teak color" which were obtained by the example of examination 1. work examples 3 and 4 and comparative examples 3 and 4 were applied with the fixed-quantity brush for ten women with the makeup custom of 23-45 years old, and the monitor examination was done about the condition of the result. The functionality evaluation is shown in Table 1.

[0051]

[Table 1]

	実施例3 アイシャドー	実施例4 チークカラー	比較例3 アイシャドー	比較例4 チークカラー
発色性	8	9	4	5
明度	9	10	6	6
付着性(つき)	9	8	5	3
展伸性(のび)	8	9	8	7

Evaluation performed the next four-step evaluation and judged good nature by the number of O and O. In addition, the number estimated as O and O was indicated for every item.

[0052] O good and O -- a little -- good and * -- usually -- x -- since the cosmetics paints of this example 4 are juxtaposed uniformly on skin like drawing 1, the above which is not desirable shows that there is no fall of brightness also at the time of an application. Furthermore, the

bright high coloring effect of chroma saturation is also acquired.

[0053] 6g of Miyoshi Oil & Fat OROMIN (sodium dodecylbenzenesulfonate) is added to the cosmetics paints work-example 5. 1st solution by an emulsification method, and 200ml of JIS No. 3 sodium silicate solution (4mol/l. as SiO₂). this -- red oxide of iron (red ocher) -- the nature of nonporous 2 silicon-oxide particles (the Nippon Shokubai Kagaku Kogyo Co., Ltd. quantity purity composition spherical silica --) of 53.4g and the shape of a real ball SHIFO star KE-P100 and 1.0 micrometers of diameter of particle**0.1 [5.4g] were added, high-speed distribution during 30 minutes was carried out in gay DISUPA, irradiating an ultrasonic wave with a Shimadzu Corp. make SUS-103 type ultrasonic wave distribution machine (28kHz, 100W), and the first mixed-solution was obtained.

[0054] Thus, after adding the 1st obtained mixed-solution to 800ml of organic solvents which dissolved 15g of SORUBIN mono-olate to 1l. of toluene, the water-in-oil type emulsion was obtained by high-speed churning by gay mixer 10,000 R/M.

[0055] It added agitating this water-in-oil type emulsion in 5l. of 1.5mol/l. ammonium bicarbonate solution (the 2nd solution), the reaction was performed for about 3 hours, and water-insoluble nature precipitation output was obtained.

[0056] After performing filtration, flush, and alcoholic washing for this after a reaction, dryness is performed at 110 degrees C for 24 hours. About 3.2 micrometers of mean particle sizes and grade distribution which wrapped the core of nature of real ball-like nonporous 2 silicon-oxide particles entirely in the porosity 2 silicon-oxide (Silikagel) layer which confined red oxide of iron about 50% obtained about 100g of spherical coloring particulates of the red of 1.2 by d25/d75.

[0057] 10g of Nippon Oil & Fats DAIYABON OM (polycarboxylic acid type polymer negative ion) is added to the work-example 6. 1st solution, and 200ml of JIS No. 3 sodium silicate solution (4mol/l. as SiO₂). this -- yellow iron oxide -- the nature of nonporous 2 silicon-oxide particles (the Nippon Shokubai Kagaku Kogyo Co., Ltd. quantity purity composition spherical silica --) of 43.6g and the shape of a real ball SHIFO star KE-P100 and 1.0 micrometers of diameter of particle**0.1 [15.2g] were added, high-speed distribution during 30 minutes was carried out in gay DISUPA, irradiating an ultrasonic wave with a Shimadzu Corp. make SUS-103 type ultrasonic wave distribution machine (28kHz, 100W), and the first mixed-solution was obtained.

[0058] Thus, after adding what mixed polyoxy ethylene sorbitan MONOORETO and sorbitan monostearate for the 1st obtained mixed-solution by 1:1 to 1l. of HEKISAN to 800ml of organic solvents dissolved 20g, The water-in-oil type emulsion was obtained by high-speed churning by gay mixer 10,000 R/M.

[0059] It added agitating this water-in-oil type emulsion in 5l. of 2mol/l. ammonium sulfate solution (the 2nd solution), the reaction was performed for about 3 hours, and water-insoluble nature precipitation output was obtained.

[0060] After performing filtration, flush, and alcoholic washing for this after a reaction, dryness is performed at 110 degrees C for 24 hours. About 3.8 micrometers of mean particle sizes and article size distribution which wrapped the core of nature of real ball-like nonporous 2 silicon-oxide particles entirely in the porosity 2 silicon-oxide (Silikagel) layer which confined red oxide of iron about 41% obtained about 100g of spherical coloring particulates of the yellow of 1.3 by d25/d75.

[0061] As mentioned above, the cosmetics paints of the structure which wrapped the nature particulates 1 of nonporous [inorganic] as shown in drawing 2 according to work examples 5 and 6 entirely in the inorganic porosity material layer 5 in which the pigment 3 is confined were obtained.

[0062] 6g of Miyoshi Oil & Fat OROMIN (sodium dodecylbenzenesulfonate) is added to the comparative example 5. 1st solution, and 200ml of JIS No. 3 sodium silicate solution (4mol/l. as SiO₂). this -- red oxide of iron (red ocher) -- the nature of nonporous 2 silicon-oxide particles (the Nippon Shokubai Kagaku Kogyo Co., Ltd. quantity purity composition spherical silica --) of 53.4g and the shape of a real ball SHIFO star KE-P100 and 1.0 micrometers of diameter of particle**0.1 [5.4g] were added, high-speed distribution during 30 minutes was carried out in gay DISUPA, irradiating an ultrasonic wave with a Shimadzu Corp. make SUS-103 type ultrasonic wave distribution machine (28kHz, 100W), and the first mixed-solution was obtained.

[0063] Thus, after adding the 1st obtained mixed-solution to 800ml of organic solvents which dissolved 15g of SORUBIN mono-olate to 1l. of toluene, the water-in-oil type emulsion was obtained by low-speed churning by gay mixer 3,000 R/M.

[0064] It added agitating this water-in-oil type emulsion in 5l. of 1.5mol/l. ammonium bicarbonate solution (the 2nd solution), the reaction was performed for about 3 hours, and water-insoluble nature precipitation output was obtained.

[0065] After performing filtration, flush, and alcoholic washing for this after a reaction, dryness is performed at 110 degrees C for 24 hours. About 3.6 micrometers of mean particle sizes and grade distribution which wrapped the core of nature of real ball-like nonporous 2 silicon-oxide particles entirely in the porosity 2 silicon-oxide (Silikagel) layer which confined red oxide of iron about 50% obtained about 100g of spherical coloring particulates of the red of 2.7 by d25/d75.

[0066] 10g of Nippon Oil & Fats DAIYABON OM (polycarboxylic acid type polymer negative ion) is added to the comparative example 6. 1st solution, and 200ml of JIS No. 3 sodium silicate solution (4mol/l.) as SiO₂). this -- yellow iron oxide -- the nature of nonporous 2 silicon-oxide particles (the Nippon Shokubai Kagaku Kogyo Co., Ltd. make high purity composition spherical silica --) of 43.6g and the shape of a real ball SHIFO star KE-P100 and 1.0 micrometers of diameter of particle**0.1 [15.2g] were added, high-speed distribution during 30 minutes was carried out in gay DISUPA, irradiating an ultrasonic wave with a Shimadzu Corp. make SUS-103 type ultrasonic wave distribution machine (28kHz, 100W), and the 1st mixed-solution was obtained.

[0067] Thus, after adding what mixed polyoxy ethylene sorbitan MONOORETO and sorbitan monostearate for the 1st obtained mixed-solution by 1:1 to 1l. of HEKISAN to 800ml of organic solvents dissolved 20g, The water-in-oil type emulsion was obtained by low-speed churning by gay mixer 3,000 R/M.

[0068] It added agitating this water-in-oil type emulsion in 5l. of 2mol/l. ammonium sulfate solution (the 2nd solution), the reaction was performed for about 3 hours, and a water-soluble precipitation output was obtained.

[0069] After performing filtration, flush, and alcoholic washing for this after a reaction, dryness is performed at 110 degrees C for 24 hours. the spherical coloring particulates of yellow coloring of about 4.3 micrometers of mean particle sizes and article size distribution which carried out the bubble of the core of nature of real ball-like nonporous 2 silicon-oxide particles in the porosity 2 silicon-oxide (Silikagel) layer which confined yellow iron oxide about 41% of 3.2 by d25/d75 -- about -- it obtained 100.

[0070] "Face powder" 100g was prepared using the red spherical particulates and yellow spherical particulates which were obtained in the work-example 7. work examples 5 and 6 as follows.

[0071]

Talc 86.35g Stearic acid magnesium 3.00g Silk powder 1.00g A methylpolisiloxane 2.00g Titanium oxide 4.00g Black oxide of iron 0.15g Red spherical particulates (work example 5) 0.90g Yellow spherical particulates (work example 6) 2.60g "Face powder" 100g was prepared using the red spherical particulates and yellow spherical particulates which were obtained by the 100g of whole-quantity comparative example 7. comparative examples 5 and 6 as follows.

[0072]

Talc 86.35g Stearic acid magnesium 3.00g Silk powder 1.00g A methylpolisiloxane 2.00g Titanium oxide 4.00g Black oxide of iron 0.15g Red spherical particulates (comparative example 5) 0.90g Yellow spherical particulates (comparative example 6) 2.60g A fixed quantity was applied to the cheek part with the puff for ten women who have the makeup custom of 19-51 years old in the "face powder" obtained by the example of 100g of whole-quantity examination 2. work example 7, and the comparative example 7, and spectrometry finish before (face without make-up) in an application part and after finish was performed. The comparison data of the brightness is expressed to Table 2. Measurement is based on "spectrum ***** CM-1000" by Minolta Camera Co., Ltd.

[0073]

[Table 2]

実施例7の比較データ

試験者	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	平均
1 仕上げ前のL*	63.26	66.25	65.66	58.42	66.33	62.25	63.15	67.11	63.64	62.77	63.60	58.80	59.50	61.78	62.94	63.03
2 仕上げ後のL*	63.89	67.23	66.22	59.38	66.88	62.59	63.73	67.18	63.84	63.18	64.25	59.10	60.74	62.60	63.37	63.61
差(2-1)	0.63	0.98	0.56	0.96	0.55	0.34	0.58	0.07	0.20	0.41	0.65	0.30	1.24	0.82	0.43	0.58

L*は色の明度を示す

比較例7の比較データ

試験者	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	平均
1 仕上げ前のL*	63.26	66.25	65.66	58.42	66.33	62.25	63.15	67.11	63.64	62.77	63.60	58.80	59.50	61.78	62.94	63.03
2 仕上げ後のL*	63.57	67.06	66.07	59.35	66.80	62.40	63.61	67.22	63.74	63.10	63.85	59.47	60.02	61.97	62.98	63.41
差(2-1)	0.31	0.81	0.41	0.93	0.47	0.15	0.46	0.11	0.10	0.33	0.25	0.67	0.52	0.19	0.04	0.38

The more the makeup cosmetics of this example have uniformly near paints particles, there are few falls of brightness which come from an overlap of coloring matter, and, the more it is shown that the bright high feeling of a result of a transparent feeling is expectable with the time of lengthening to skin as a result, so that these measured value may show.

[0074]

[Effect of the Invention] As mentioned above, since it is the spherical paints of the diameter of a uniform particle, the cosmetics paints concerning this invention are juxtaposed, without paints' sliding on a skin top and paints overlapping, if paints are put on skin. Namely, it will be in the state of juxtaposition additive color mixing. Therefore, there is no ***** and brightness of skin is not changed. Furthermore, the bright high coloring effect of chroma saturation is also acquired.

[0075] Moreover, when the pigment is included by transparent metal oxide gel, coloring which resembles the textures of skin and has a natural transparent feeling is obtained.

[0076] furthermore, the case where the pigment is included by metal oxide gel -- sweat and leather fat -- getting wet -- there is almost no color change.

[Translation done.]